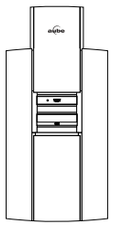
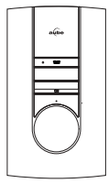
TH113 & TH116 A/F/AF

Owner's Guide

Thank you for choosing Aube's non-programmable thermostat. Your new electronic thermostat is equipped with a microprocessor and proportional integral adaptive (PIA) temperature control technology for total comfort. Depending on the selected model, this thermostat has been designed to control:



TH116
Public Area



TH113

A: The **A**mbient temperature (using an electric heating system)

AF: The **A**mbient temperature with **F**loor temperature limit (using a floor heating system to heat the room)

F: The **F**loor temperature (floor heating)

***NOTE:** This control module must be mounted on a PB112 Series power base.*

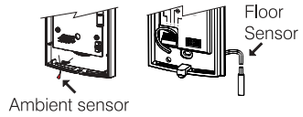
The thermostat has an On/Standby switch making it possible to put the thermostat in sleep mode when its use is no longer required (e.g. summer).

1 Model Selection (switch)

FOR A AND AF MODELS ONLY

At the rear of the control module is a switch that has been factory-set to the applicable temperature control.

***NOTE:** The AF model can be used for all temperature control types (A, F and AF).*



Note: The ambient sensor is not operational when the switch is set to I (up).

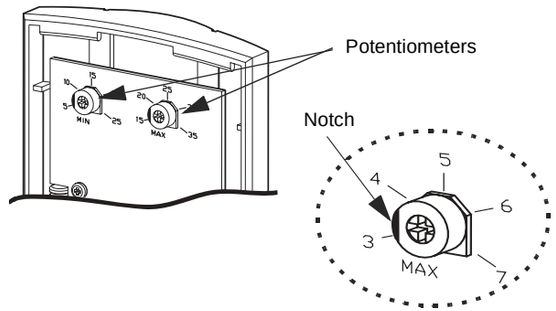
Model	Floor sensor	Switch S3	Ambient sensor
F		I / 0	
AF		I / 0	
A		I / 0	

2 Temperature Lock (TH113 only)

At the rear of the control module are two potentiometers. These potentiometers act like a temperature lock. Even when occupants adjust the temperature using the dial on the front/rear of the control module, the potentiometers override the dial and maintain the temperature within the locked-in minimum and maximum range.

- **A** - ambient temperature
- **F & AF** - floor temperature limit

Use a flat tip screwdriver to rotate the potentiometers until the notch points to the desired temperature.



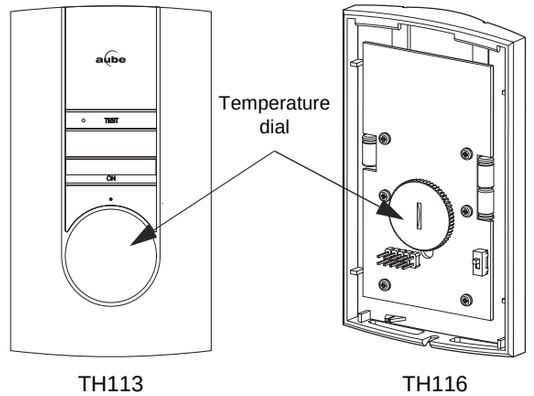
3 Setpoint Definition

Turn the dial to the desired temperature.

TH113: The dial is located on the front of the control module.

TH116: The dial is located on the rear of the control module.

The min. position indicates the minimum temperature setpoint: 45°F (7°C).

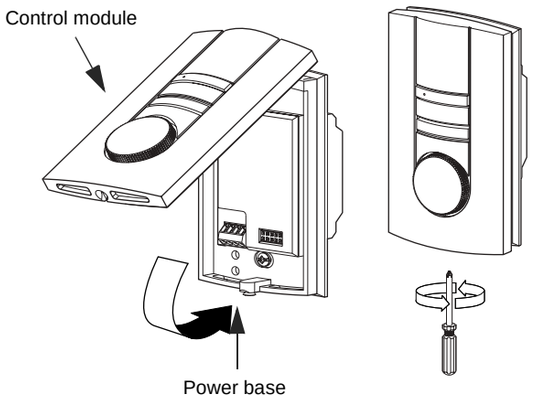


TH113 TH116

4 Control Module Installation

Align the bracket tabs on the control module with the holes located on the power base.

Follow the same procedure for the TH116.

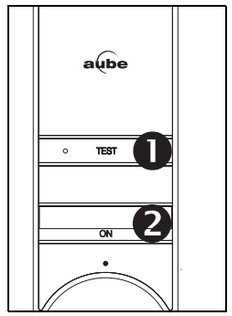


***NOTE:** Keep the thermostat's air vents clean and free from obstructions.*

***NOTE:** The screw cannot be removed completely.*

5 GFCI Test GA & GB power base only

The GFCI monitors the electrical flow for any loss of current; if there is any loss, the thermostat will cut off power to the heating system. We recommend you test the GFCI immediately after installing the control module, and once a month thereafter to ensure it is operating properly. To test:



❶ Press the TEST button:

- **Successful**: TEST warning light is ON and power to heating system is cut off.
- **Unsucessful**: The TEST warning light is OFF. Cut power to heating system from the main power panel and call customer service.

❷ When successful, reset thermostat (STANDBY/ON) to power heating system.

***NOTE:** If the test warning light comes ON during normal operation, cut power to heating system from the main power panel and have an electrician verify the installation.*

6 Remote Input

The TH113 and TH116 are equipped with a remote input which allows connection of an optional telephone controller (CT240) or any other remote control system. When a command signal is received through this input, the thermostat automatically lowers its setpoint by 3.5°C. The LED lights up to indicate the signal's presence (except for GA and GB models).

Bypass (not available for GA and GB power base):
The TEST button can be used to bypass the signal for a 2-hour period. The LED goes off to indicate the bypass.

***NOTE:** When combined with a GA/GB power base, the TEST button is used only for GFCI testing. The bypass function is not available with these power base models.*

Technical Specifications

Models: TH113 and TH116 A / AF / F
Setting range: 45°F, 59°F to 95°F (7°C, 15°C to 35°C)
Potentiometers: minimum: 41°F to 77°F (5°C to 25°C)
maximum: 59°F to 95°F (15°C to 35°C)
Accuracy: ± 0.9°F (0.5°C)
Storage: -4°F to 120°F (-20°C to 50°C)

Warranty

AUBE TECHNOLOGIES INC. ONE (1) YEAR LIMITED WARRANTY

This product is guaranteed against workmanship defects for a one year period following the initial date of purchase. During this period, AUBE Technologies Inc. will repair or replace, at our option and without charge, any defective product which has been used under normal conditions. The warranty does not cover delivery costs and does not apply to products poorly installed or randomly damaged following installation. This warranty cancels and replaces any other manufacturer's express or implied warranty as well as any other company commitment. AUBE Technologies Inc. cannot be held liable for related or random damages following the installation of this product. The defective product as well as the purchase invoice must be returned to the place of purchase or mailed, prepaid and insured, to the following address:

Aube Technologies Inc.
705 Montrichard
Saint-Jean-sur-Richelieu, Quebec, Canada J2X 5K8

If you have any questions concerning the TH113 or the TH116 thermostat, call our technical support team at:

Phone: Montreal area: (450) 358-4600
Canada / U.S.: 1-800-831-AUBE (2823)
Fax: y(450) 358-4650
Email: service@aubetech.com

Monday to Friday from 8:30 AM to 5:00 PM EST.
For more information on our products, visit us at:
www.aubetech.com

01/08/03 920-113-001-00-1-A

PB112-024T

Installation Instructions

24 V Low-Voltage Power Base

1 Applications

The PB112-024T power base can be used on any TH11x series thermostat (with the exception of the TH110 model). This low-voltage power base operates on 15-minute cycles and can be connected to a line-voltage load using a relay or directly to a 24-volt device. The PB112-024T is compatible with most relays; however, the following Aube relays are optimized for use with this power base:

- RT850 solid-state relay (SSR)
- RT850T solid-state relay (SSR) with built-in 24-V transformer
- RC840 electromechanical relay
- RC840T electromechanical relay with built-in 24-V transformer

2 Supplied Parts

1. One (1) power base
2. Two (2) plastic anchors
3. Two (2) mounting screws

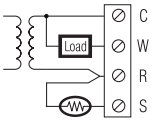
3 Installation Guidelines

- For a new installation, choose a location about 1.5 m (5 ft.) above the floor.
- The thermostat must be installed on an inside wall facing the heating system (except for floor heating systems).
- Avoid locations where there are air drafts (top of staircase, air outlet), dead air spots (behind a door), direct sunlight or concealed chimney or stove pipes (except for floor heating systems).

4 Installation Procedure

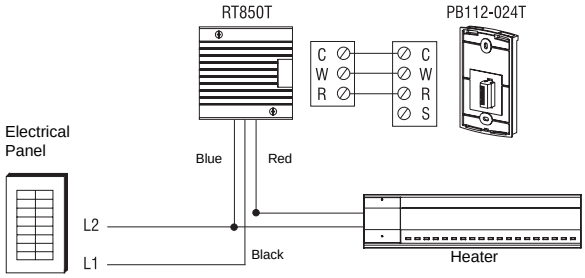
The installation must be carried out by an electrician and comply with local electrical codes.

1. Turn off power to the heating system at the main electrical panel to avoid electrical shock.
2. Wire the base according to your application. See typical wiring diagrams in sections 4.1 to 4.4.
3. For a floor heating system installation, connect the floor sensor between the S and R terminals.

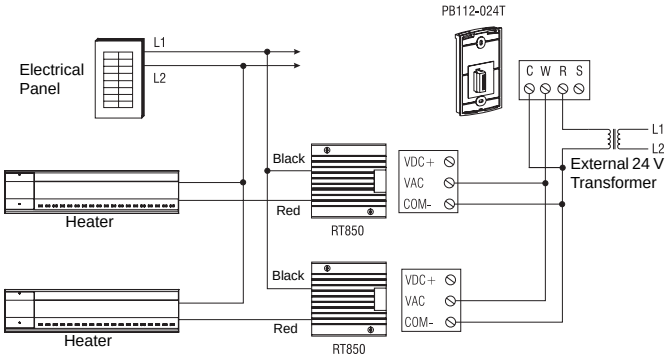


4. Secure the base to the wall using the provided screws and wall anchors.
5. Configure the switches located on the control module (if any). Refer to the user guide.
6. Install the control module onto the base.
7. Apply power to the heating system.
8. Verify the installation by checking that the heating system can be turned on or off using the thermostat.

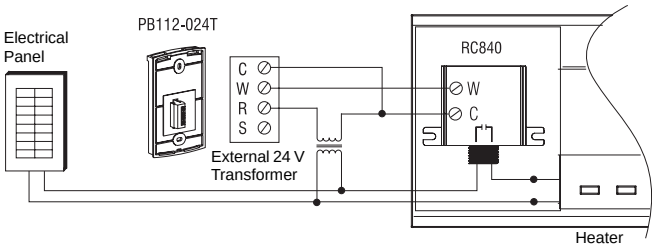
4.1 Single SSR with Built-in Transformer



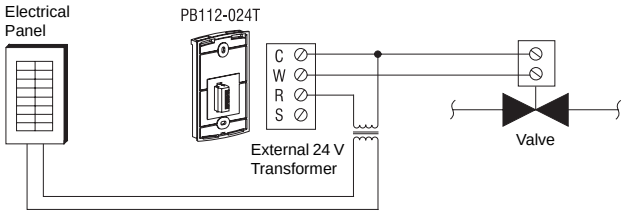
4.2 Multiple SSRs with External Transformer



4.3 Electromechanical Relay with External Transformer



4.4 Hot Water Heater Valve



5 Technical Specifications

Maximum load: 0.5 A / 24 VAC
Heating cycle length: 15 minutes
Operating temperature: 32°F to 122°F (0°C to 50°C)
Storage: -4°F to 122°F (-20°C to 50°C)
Size (H • W • D): 124 x 70 x 23 mm (4.89 x 2.76 x 0.91 in)
Wire gauge: 14 to 22 AWG